

**I CLAIM:**

1. A cosmetic composition for the treatment of keratinous fibres comprising, in a cosmetically acceptable medium, at least one fixing polymer and at least one amphoteric starch.

5 2. A cosmetic composition for the treatment of keratinous fibres according to claim 1, wherein said at least one fixing polymer is present in a concentration ranging from 0.05 to 20% by weight, relative to the total weight of said composition.

10 3. A cosmetic composition for the treatment of keratinous fibres according to claim 2, wherein said at least one fixing polymer is present in a concentration ranging from 0.1 to 10% by weight, relative to the total weight of said composition.

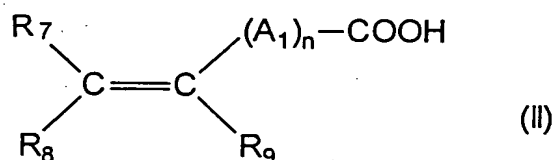
15 4. A cosmetic composition for the treatment of keratinous fibres according claim 1, wherein said at least one amphoteric starch is present in a concentration ranging from 0.01 to 15% by weight, relative to the total weight of said composition.

20 5. A cosmetic composition for the treatment of keratinous fibres according to claim 4, wherein said at least one amphoteric starch is present in a concentration ranging from 0.05 to 10% by weight, relative to the total weight of said composition.

6. A cosmetic composition for the treatment of keratinous fibres according to claim 1, wherein said at least one fixing polymer is chosen from anionic, cationic, amphoteric and non-ionic polymers.

7. A cosmetic composition for the treatment of keratinous fibres according to claim 6, wherein said at least one fixing anionic polymer is chosen from:

- polymers containing carboxyl units derived from at least one monomer of the formula II or a salt thereof:



in which:

10 n is an integer from 0 to 10,

A<sub>1</sub> denotes a methylene group, optionally connected to the carbon atom of the unsaturated group or to the neighbouring methylene group, when n is greater than 1, via a heteroatom,

R<sub>7</sub> denotes a hydrogen atom or a phenyl or benzyl group,

15 R<sub>8</sub> denotes a hydrogen atom or a lower alkyl or carboxyl group, and

R<sub>9</sub> denotes a hydrogen atom, a lower alkyl group or a -CH<sub>2</sub>-COOH, phenyl or benzyl group; and

- polymers comprising units derived from sulphonic acid.

8. A cosmetic composition for the treatment of keratinous fibres according to claim 7, wherein said heteroatom is oxygen or sulphur and wherein said units derived from sulphonic acid are selected from vinylsulpho, styrenesulpho and acrylamidoalkylsulpho units.

5 9. A cosmetic composition for the treatment of keratinous fibres according to claim 7, wherein said at least one fixing anionic polymer is chosen from:

A) homo- or copolymers derived from acrylic or methacrylic acid or their salts, copolymers derived from acrylic acid and acrylamide and their  
10 salts or the sodium salts of polyhydroxycarboxylic acids, wherein said acrylic acid copolymers differ from those defined below in C);

B) copolymers derived from crotonic acid, it being possible for these copolymers optionally to be grafted and crosslinked;

C) copolymers derived from mono-unsaturated C<sub>4</sub>-C<sub>8</sub> carboxylic acids  
15 or anhydrides chosen from:

- copolymers derived from (i) at least one monomer chosen from maleic, fumaric and itaconic acids and anhydrides and (ii) at least one monomer chosen from vinyl esters, vinyl ethers, vinyl halides, phenylvinyl derivatives, acrylic acid and its esters, the anhydride  
20 functional groups of these copolymers optionally being monoesterified or monoamidified;

- copolymers derived from (i) at least one monomer chosen from maleic, citraconic and itaconic anhydrides and (ii) at least one monomer chosen from allyl and methallyl esters, optionally containing at least one acrylamide, methacrylamide,  $\alpha$ -olefin, acrylic ester, methacrylic ester, acrylic acid, methacrylic acid, and vinylpyrrolidone group in their chain, the anhydride functional groups of these copolymers optionally being monoesterified or monoamidified; and

D) polyacrylamides containing carboxylate groups.

10. A cosmetic composition for the treatment of keratinous fibres according to claim 9, wherein said copolymers derived from acrylic or methacrylic acid or their salts are chosen from copolymers derived from acrylic or methacrylic acid and at least one monoethylenic monomer, optionally grafted onto a polyalkylene glycol, and optionally crosslinked, and copolymers derived from acrylic or methacrylic acid containing, in their chain, an optionally N-alkylated and/or -hydroxyalkylated acrylamide unit and further wherein said copolymers derived from crotonic acid contain in their chain, vinyl acetate or propionate units and optionally other monomers.

11. A cosmetic composition for the treatment of keratinous fibres according to claim 10, wherein said polyalkylene glycol is polyethylene glycol.

12. A cosmetic composition for the treatment of keratinous fibres according to claim 10, wherein said at least one monoethylenic monomer is chosen from ethylene, styrene, vinyl esters and esters of acrylic or methacrylic acid, wherein said copolymers derived from acrylic acid and at least one monoethylenic monomer are copolymers derived from acrylic acid and C<sub>1</sub>-C<sub>4</sub> alkyl methacrylate and further wherein said optional other monomers in said copolymers derived from crotonic acid are chosen from allyl and methallyl esters, vinyl ethers and vinyl esters of a linear or branched saturated carboxylic acid containing a long hydrocarbon chain.

13. A cosmetic composition for the treatment of keratinous fibres according to claim 12, wherein said long hydrocarbon chain contains at least 5 carbon atoms.

14. A cosmetic composition for the treatment of keratinous fibres according to claim 9 wherein said at least one fixing anionic polymer is chosen from:

- copolymers derived from acrylic acid;
- copolymers derived from crotonic acid;
- copolymers derived from (i) at least one monomer chosen from maleic, fumaric and itaconic acids and anhydrides and (ii) at least one monomer chosen from vinyl esters, vinyl ethers, vinyl halides, phenylvinyl

derivatives, acrylic acid and its esters the monoesterified maleic anhydride/methyl vinyl ether copolymers;

- copolymers derived from methacrylic acid and methyl methacrylate;
- copolymers derived from methacrylic acid and ethyl acrylate;
- 5 - copolymers derived from vinyl acetate and crotonic acid; and
- terpolymers derived from vinyl acetate, crotonic acid and polyethylene glycol.

15. A cosmetic composition for the treatment of keratinous fibres according to claim 14, wherein said copolymers derived from  
10 acrylic acid are terpolymers derived from acrylic acid, ethyl acrylate and N-tert-butylacrylamide, wherein said copolymers derived from crotonic acid are chosen from terpolymers derived from vinyl acetate, vinyl tert-butylbenzoate and crotonic acid and terpolymers derived from crotonic acid, vinyl acetate and vinyl neododecanoate, and wherein said  
15 copolymers derived from (i) at least one monomer chosen from maleic, fumaric and itaconic acids and anhydrides and (ii) at least one monomer chosen from vinyl esters, vinyl ethers, vinyl halides, phenylvinyl derivatives, acrylic acid and its esters are chosen from copolymers derived from monoesterified maleic anhydride and methyl vinyl ether.

20 16. A cosmetic composition for the treatment of keratinous fibres according to claim 6, wherein said at least one fixing amphoteric polymer is chosen from polymers containing units derived from:

a) at least one monomer chosen from acrylamides or methacrylamides substituted on the nitrogen by an alkyl radical,

b) at least one acidic comonomer containing at least one reactive carboxyl groups, and

5 c) at least one basic comonomer.

17. A cosmetic composition for the treatment of keratinous fibres according to claim 16, wherein said at least one basic comonomer is selected from esters containing primary, secondary, tertiary and quaternary amine substituents of acrylic and methacrylic acids and from  
10 the product of the quaternization of dimethylaminoethyl methacrylate with dimethyl or diethyl sulphate.

18. A cosmetic composition for the treatment of keratinous fibres according to claim 16, wherein said at least one fixing amphoteric polymer is selected from copolymers derived from Octylacrylamide,  
15 acrylates and butylaminoethyl methacrylate and copolymers derived from methyl methacrylate and methyl dimethylcarboxy-methylammonioethylmethacrylate.

19. A cosmetic composition for the treatment of keratinous fibres according to claim 6, wherein said at least one fixing non-ionic  
20 polymer is chosen from:

- polyalkyloxazolines;
- vinyl acetate homopolymers;

- copolymers derived from vinyl acetate and acrylic ester;
- copolymers derived from vinyl acetate and ethylene;
- copolymers derived from vinyl acetate and maleic ester;
- copolymers derived from polyethylene and maleic anhydride;
- 5 - alkyl acrylate homopolymers and alkyl methacrylate homopolymers;
- copolymers derived from acrylic esters;
- copolymers derived from acrylonitrile and a non-ionic monomer; and
- copolymers derived from alkyl acrylate and urethane.

20. A cosmetic composition for the treatment of keratinous  
10 fibres according to claim 19, wherein said copolymers derived from  
acrylic esters are chosen from copolymers derived from alkyl acrylates  
and alkyl methacrylates and wherein said non-ionic monomer is chosen  
from butadiene and alkyl (meth)acrylates.

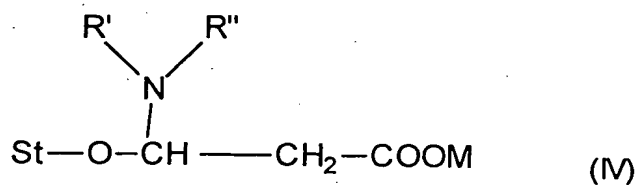
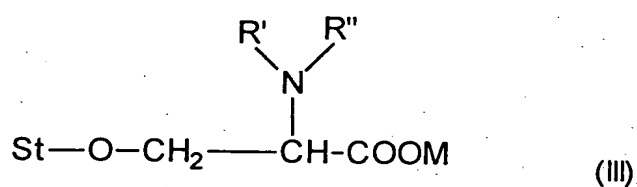
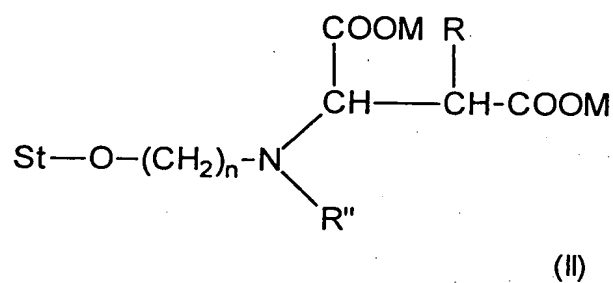
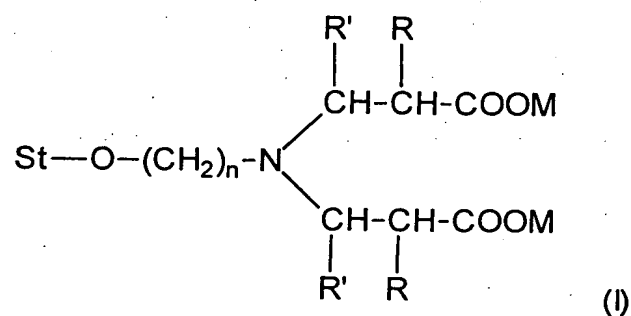
21. A cosmetic composition for the treatment of keratinous  
15 fibres according to claim 6, wherein said at least one fixing cationic  
polymer is chosen from:

- copolymers derived from acrylamide and dimethylaminoethyl  
methacrylate which are quaternized with dimethyl sulphate,
- copolymers derived from acrylamide and methacryloyloxy-  
20 ethyltrimethylammonium chloride,
- copolymers derived from acrylamide and methacryloyloxy-  
ethyltrimethylammonium methyl sulphate,



- copolymers derived from optionally quaternized vinylpyrrolidone and dialkylaminoalkyl acrylate or methacrylate,
- terpolymers derived from dimethylaminoethyl methacrylate, vinylcaprolactam and vinylpyrrolidone, and
- 5 - copolymers derived from quaternized dimethylaminopropyl-methacrylamide and vinylpyrrolidone.

22. A cosmetic composition for the treatment of keratinous fibres according to claim 1, wherein said at least one amphoteric starch is chosen from the compounds of formulae (I) to (IV):



in which formulae:

St-O represents a starch molecule,

R independently represents a hydrogen atom or a methyl radical,

R' independently represents a hydrogen atom, a methyl radical or a -

5 COOH group,

n is an integer equal to 2 or 3,

M independently denotes a hydrogen atom, an alkali or alkaline-earth metal,  $\text{NH}_4$  or an organic amine,

R'' represents a hydrogen atom or an alkyl radical having from 1 to 18

10 carbon atoms.

23. A cosmetic composition for the treatment of keratinous fibres according to claim 22, wherein said at least one amphoteric starch is chosen from the compounds of formulae (I) and (II).

24. A cosmetic composition for the treatment of keratinous  
15 fibres according to claim 22, wherein said R, R', R'' and M represent a hydrogen atom and n is equal to 2.

25. A cosmetic composition for the treatment of keratinous fibres according to claim 1, wherein said cosmetically acceptable medium comprises water or a mixture of water and at least one  
20 cosmetically acceptable solvent.

26. A process for the cosmetic treatment of keratinous fibres comprising the application on said keratinous fibres of a care, styling or fixing composition as defined in claim 1.

27. A process according to claim 26 wherein said keratinous  
5 fibres are hair.

28. A care, styling or fixing composition according to claim 1.

29. A care, styling or fixing composition according to claim 28,  
wherein said keratinous fibres are hair.

30. A process for making a cosmetic composition for the  
10 treatment of keratinous fibres comprising the step of including the  
composition defined in claim 1 in said cosmetic composition.